

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

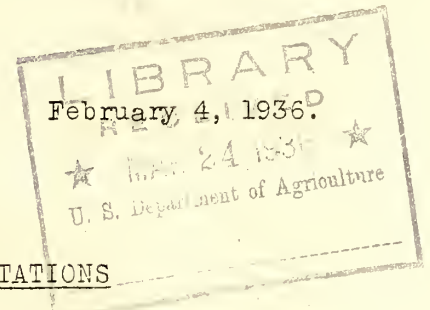
1.9
W 3789

UNITED STATES DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
Washington

Office of the Chief

CIRCULAR

ELEVATIONS REQUIRED FOR AIRPORTS
AND FOR AIRPORT, AIRWAY, AND OFF-AIRWAY STATIONS



Reference is made to the note on pages 202 and 203 of the November, 1935, issue of Topics and Personnel entitled "Elevation of First- and Second Order Airport and Intermediate Field Airway Stations".

Attention of all general supervising stations is called to the request in the above-mentioned note that they forward to the Central Office, as soon as practicable, a list of the values: (1) the official elevation of the station (H = height of the ground above sea level at the station), (2) the station elevation (H_s = elevation above sea level adopted for the station as the basis to which all pressure observations at the station are correlated), (3) the actual elevation of the barometer, and (4) the elevation of the 8-foot plane above the most-used landing point of the airport (if any) for the airport, airway, and off-airway stations in their districts, giving explicitly in each case a description of the fixed reference point on the ground to which the elevation "H" pertains. In the case of each of these four data the source of the information should be indicated and also whether the data are based on estimates, measurements, or surveys.

Since there may be some ambiguity in regard to the meaning of the fourth term listed above, it is necessary to give a definition thereof in such terms that the most appropriate result will be obtained. It is desired that the term "most-used landing point of the airport" should signify "any point at an elevation equal to the average of the elevations of all possible landing points of the airport, taking into consideration all runways and all possible directions of landing". In practice this definition may be exemplified by the following rule: (1) Take the mean of the elevations of the landing points at the two extremities of each respective runway, and then (2) take the average of these mean elevations for all runways combined. This average is the desired result and may be regarded as the most representative landing elevation for the airport when all possible directions of landing are taken into consideration.

The method of obtaining the elevation (above sea level) of the 8-foot plane above the point in question is obvious, once the latter has been determined.

Stations which have already adopted a value for the "8-foot plane above the most-used landing point of the airport" may retain the adopted value despite the above interpretation placed on the meaning of this expression.

As an addendum to the instructions given in the note in Topics and Personnel referred to at the beginning of this Circular, it is requested that all general supervising stations submit to the Central Office, along

with the information already required, the following: (a) a sketch and brief description of the terminal or intermediate field located near each station in their district which renders reports used in the airway weather service, (hereunder, the position of the station relative to the airport should be indicated, the various runways should be shown, and the approximate dimensions as well as the elevations of the runways at various points pertinent to this survey should be given); and (b) the manner of deciding upon or of computing the most representative landing elevation, i. e., what we intend to mean by the term "most-used landing point", (hereunder, if any definite point or points on the field can be identified as being at that elevation then they should be so marked on the sketch by appropriate notations).

The cooperation of all stations is requested to facilitate the compilation by the general supervising stations of the required information.

As pointed out at the end of the note in Topics and Personnel referred to above, no funds are available for the making of surveys in pursuance of this project.

It is desired to emphasize that the data being requested are of considerable importance since they are needed to serve as the underlying basis in the scheme now being developed of having airway stations associated with airports transmit in their reports "pressures reduced to sea level in accordance with the Standard Atmosphere" which are essential when setting sensitive (Kollsman) altimeters for landing or cross-country flying purposes. Some details regarding this scheme may be found on pages 11 and 12 of the "Memorandum on Proposed Airport and Airway Traffic Control" issued by the Bureau of Air Commerce, Department of Commerce. A copy of this memorandum was recently forwarded to each general supervising station.



W. R. Gregg,
Chief of Bureau.